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| APPLICATION NO.                       | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO.     | CONFIRMATION NO. |
|---------------------------------------|-------------|----------------------|-------------------------|------------------|
| 10/675,566                            | 09/30/2003  | Gordon Y. Li         | 81373818US01-02CXT0070D | 9980             |
| 65913                                 | 7590        | 02/05/2010           | EXAMINER                |                  |
| NXP, B.V.                             |             |                      | HOSSAIN, TANIM M        |                  |
| NXP INTELLECTUAL PROPERTY & LICENSING |             |                      |                         |                  |
| M/S41-SJ                              |             |                      | ART UNIT                | PAPER NUMBER     |
| 1109 MCKAY DRIVE                      |             |                      |                         | 2445             |
| SAN JOSE, CA 95131                    |             |                      |                         |                  |
| NOTIFICATION DATE                     |             | DELIVERY MODE        |                         |                  |
| 02/05/2010                            |             | ELECTRONIC           |                         |                  |

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

ip.department.us@nxp.com

|                              |                        |                     |  |
|------------------------------|------------------------|---------------------|--|
| <b>Office Action Summary</b> | <b>Application No.</b> | <b>Applicant(s)</b> |  |
|                              | 10/675,566             | LI ET AL.           |  |
|                              | <b>Examiner</b>        | <b>Art Unit</b>     |  |
|                              | Tanim Hossain          | 2445                |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 05 October 2009.
- 2a) This action is **FINAL**.                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1-16 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All    b) Some \* c) None of:
1. Certified copies of the priority documents have been received.
  2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                         | Paper No(s)/Mail Date. _____ .                                    |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ . | 5) <input type="checkbox"/> Notice of Informal Patent Application |
|  | 6) <input type="checkbox"/> Other: _____ .                        |

## **DETAILED ACTION**

### ***Claim Objections***

Claim 1 is objected to because of the following informalities: The term, “the cable mode engine” in line 9 appears to be a typographical error. Appropriate correction is required.

### ***Election/Restriction***

The restriction requirement filed on September 3, 2009 is hereby withdrawn.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claim 12 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Claim 12 discloses that the data networking engine includes a RISC processor, which is not supported by the specification.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 12 -14 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 12 contains the term “substantially” The term is not defined in the specification rendering the claim indefinite. Other claims are dependent from claim 12.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-16 are rejected under 35 U.S.C. 102(e) as being anticipated by Brooks (U.S. 2001/0039600).

The applied reference has a common assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention “by another,” or by an appropriate showing under 37 CFR 1.131.

As per claim 1, Brooks teaches a cable modem system comprising: a data networking engine implemented in a first circuit that includes at least one processor (Figure 2), the data networking engine programmed with software that when executed by the at least one processor of the first circuit causes the data networking engine to perform home networking functions including interfacing with customer provided equipment (Abstract; paragraphs 0014, 0026, 0037, 0066-0068); a cable modem engine implemented in a second circuit that includes at least one processor, the second circuit being separate from the first circuit, the cable modem engine programmed with software that when executed by the at least one processor of the second circuit causes the cable modem engine to perform cable modem functions other than the home networking functions performed by the data networking engine, the cable modem engine configured to enable upgrades to its software in a manner that is independent of upgrades to the software of the data networking engine (paragraphs 0026, 0037, 0042-0046, 0050-0052); a data bus that connects the data networking engine to the cable modem engine, wherein the cable modem functions performed by the cable modem engine are completely partitioned from the home networking functions performed by the data networking engine (0042-0046).

As per claim 2, Brooks teaches a cable modem system as claimed in claim 1, wherein all DOCSIS functions are localized in the cable modem engine (0024-0026).

As per claim 3, Brooks teaches a cable modem system as claimed in claim 2, wherein VoIP functionality is embedded in the cable modem engine (0024-0026).

As per claim 4, Brooks teaches a cable modem system as claimed in claim 1, and further comprising an advanced crypto engine that performs all crypto functions (0013).

As per claim 5, Brooks teaches a cable modem system as claimed in claim 1, wherein the cable modem engine comprises: a DOCSIS PHY layer (0024-0026); a DOCSIS MAC processor (0024-0026); and a DOCSIS controller (0024-0026).

As per claim 6, Brooks teaches a cable modem system as claimed in claim 5, wherein the DOCSIS PHY layer comprises a hardware transmitter and receiver (0013, 0024-0026).

As per claim 7, Brooks teaches a cable modem system as claimed in claim 5, wherein the DOCSIS MAC processor processes downstream PDU packets and forwards the processed packets directly to the data networking engine without the involvement of the DOCSIS controller in order to boost downstream throughput (0024-0026, 0028).

As per claim 8, Brooks teaches a cable modem system as claimed in claim 5, wherein all VoIP functionality is implemented in the DOCSIS controller (0024-0026).

As per claim 9, Brooks teaches a cable modem system as claimed in claim 8, wherein the VoIP functionality is in conformance with the PacketCable specification (0024-0026).

As per claim 10, Brooks teaches a cable modem system as claimed in claim 5, wherein the data networking engine is responsible for all data networking processing including advanced

multi-port bridging/routing with NAT/firewall and VPN, and home networking applications (0024-0026, 0030).

As per claim 11, Brooks teaches a cable modem system as claimed in claim 10, wherein the data networking engine comprises the entire embedded portal services functionality of the CableHome specification (0024-0026).

As per claim 12, Brooks teaches a cable modem as claimed in claim 5, wherein the cable modem engine includes: the DOCSIS PHY layer includes a transmitter and receiver (0030); the DOCSIS MAC processor is configured to implement real-time MAC functions for both upstream and downstream communications (0053-0054); the DOCSIS controller is configured to implement VoIP functionality (0025); and wherein the data networking engine includes a RISC processor configured to implement all data networking processing and home networking applications, decoupled from the implementation of the MAC functions and the VoIP functionality of the cable modem engine (0037, 0043-0045).

As per claim 13, Brooks teaches a cable modem architecture as claimed in claim 12, wherein the DOCSIS controller provides VoIP functionality in accordance with the PacketCable specification, and wherein the data networking engine provides the embedded portal services functionality of the CableHome specification, wherein the CableHome functionality provided by the data networking engine is completely decoupled from the PacketCable and DOCSIS functionality provided by the cable modem engine (0013-0016, 0024-0026).

As per claim 14, Brooks teaches a cable modem architecture as claimed in claim 13, wherein the DOCSIS MAC processor is an ARM9TDMI-based RISC processor, and wherein the DOCSIS controller is an ARM940-based RISC processor (0013-0016, 0024-0026, 0037).

As per claim 15, Brooks teaches a method for providing a flexible and partitioned cable modem gateway comprising: providing data and home networking functionality in a data networking engine; providing DOCSIS and VoIP functionality in a cable modem engine (0013-0016, 0024-0026); and partitioning the data networking engine from the cable modem engine so that the data and home networking functionality is completely decoupled from the DOCSIS and VoIP functionality (0013-0016, 0024-0026).

As per claim 16, Brooks teaches a cable modem system as claimed in claim 5, wherein the data networking engine includes consumer provided equipment drivers including a USB driver and an Ethernet driver and the data networking engine is configured to provide the embedded portal services functionality of the CableHome specification, wherein the DOCSIS controller is configured to provide VoIP functionality in accordance with the PacketCable specification, and wherein the CableHome functionality provided by the data networking engine is completely decoupled from the PacketCable and DOCSIS functionality provided by the cable modem engine (0044-0045).

***Response to Remarks***

Applicant's remarks filed on May 19, 2009 have fully been considered.

The data networking engine and cable modem engines are represented in figures 1 and 2 of the Brooks reference, including buses carrying out separate networking functions. For example, the data networking engine interfaces with the peripheral devices and employs operating system functions, and the cable modem engine implements DOCSIS functionality. These entities are completely partitioned from each other, as discussed in the cited sections.

Paragraphs 0036-0042 discuss the transfer of packets between the cable modem and data networking engines. Therefore, examiner respectfully disagrees with the assertion that there is no data networking engine, and it is respectfully submitted that the Brooks invention fully teaches the limitations of claim 7. Further, paragraph 0010 discusses the inclusion of various CableLabs standards. Because PacketCable and CableHome specifications constitute these standards, Brooks fully teaches the claim limitations.

### ***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tanim Hossain whose telephone number is (571)272-3881. The examiner can normally be reached on 8:30 am - 5 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vivek Srivastava can be reached on 571/272-7304. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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